REMARKS

The Examiner has objected to the disclosure as being informal for failing to recite certain Serial Numbers. The applicant has amended the specification accordingly.

The Examiner has rejected claims 1, 3-17, and 19-21 as being anticipated by Ramos et al. ('191), and claims 2 and 18 as being obvious over Ramos et al. ('191) in view of Tsien et al. ('205). According to the Examiner, Ramos et al. discloses an injector which injects an oil fluorescence quenching marker into the oil of the fluid stream at a first location, a light source which subjects the fluid stream to light at a wavelength which will cause the fluid stream to naturally fluoresce, and a fluorescence detection apparatus which detects the fluorescence signal from the oil in the fluid stream at a second location. All of the Examiner rejections rely on this understanding of Ramos et al.

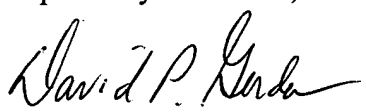
The applicant respectfully traverses the Examiner's rejection for the following reason. The present claims all require an "oil fluorescence quenching marker". As set forth in the specification a fluorescence quenching marker causes a "decrease in fluorescence" (see page 6, lines 35-38). Indeed as set forth on page 7, lines 5-13, fluorescence quenching may be accomplished by having a tracer absorb source light making it unavailable to excite fluorescence in the oil, having the tracer absorb fluorescing light thereby reducing the amount of light at the fluorescence wavelengths detected, or having the tracer quench fluorescence of the crude oil by deactivating electronically excited states of the crude oil aromatic molecules which are primarily

responsible for crude oil fluorescence. In any event, regardless of the particular mechanism utilized, by definition, an oil fluorescence quenching marker causes a **reduction** in measured fluorescence. This is seen in Figs. 4a and 4b where the fluorescence intensity which is nominally at a value of nearly 2000 is **reduced** at a later time (as the quencher passes the sensing location) to values below 1000. It is the reduction of the fluorescence value that is detected.

In contrast to the presently claimed oil **fluorescence quenching marker**, Ramos et al. suggest injecting a **fluorescent tracer dye** into the water phase and/or oil phase of a flow stream at a first location, lighting the fluid stream at a wavelength which will cause the dye to fluoresce, detecting at a second location the fluorescing dye, and measuring the time between injection and detection in order to calculate velocity. The fluorescent tracer dye does the **opposite** of the fluorescence quenching marker; i.e., the fluorescent tracer dye causes (increases) fluorescence, whereas the quenching marker stops (decreases) fluorescence. Since Ramos et al. neither teach nor suggest the use of a fluorescence **quenching** marker, and actually teach away by suggesting the use of a fluorescent tracer dye which increases fluorescence, it is respectfully submitted that the Ramos et al. patent cannot anticipate the claims nor render them obvious.

In light of all of the above, it is submitted that the claims are in order for allowance, and prompt allowance is earnestly requested. Should any issues remain outstanding, the Examiner is invited to call the undersigned attorney of record so that the case may proceed expeditiously to allowance.

Respectfully submitted,



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